

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
LYNDON B. JOHNSON SPACE CENTER**

**JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION  
PURSUANT TO 10 U.S.C. 2304 (C)(1)  
AND FEDERAL ACQUISITION REGULATION 6.302-1**

**Acquisition of high altitude flying helmets for NASA-JSC Aircraft Operations  
Directorate (AOD)**

1. **This document is a justification for other than full and open competition prepared by the NASA Johnson Space Center.**
2. **The nature and/or description of the action being approved:**  
This justification provides the rationale for contracting by other than full and open competition for the acquisition of S1034E Helmets, P/N GN40883G-01, for use in supporting high altitude flight operations by the WB-57 Project Office at the NASA Johnson Space Center.
3. **Description of the supplies or services required, include an estimated value:**  
The S1034E helmet is a component of the S1034 Pilot's Protective Assembly (PPA) high altitude full-pressure flying outfit, designed to provide protection against exposure to various environmental hazards encountered during routine and contingency operations inherent to high altitude flight. The helmet completes the full-pressure circuit enveloping the crewmember, and consists of a molded shell fitted with a movable visor and independently movable sunshade, oxygen system, anti-suffocation valve, feeding/drinking port, take-up adjustment mechanism, helmet cushion assembly, earphone and electrical cord, and microphone. The total estimated value for the 6 helmets is \$549,842.52.
4. **Statutory authority permitting other than full and open competition:**  
The statutory authority for proceeding with this acquisition under Other Than Full and Open Competition is 10 USC 2304 (c)(1) and FAR 6.3202-1 which states that full and open competition need not be provided for when there is only one responsible source and no other supplies or services will satisfy agency requirements. It is likely that award to any other source would result in substantial duplication of cost to the Government that is not expected to be recovered through competition, and unacceptable delays in fulfilling the agency's requirements.
5. **A demonstration that the proposed contractor's unique qualifications or the nature of the acquisition requires use of the authority cited:**  
David Clark Company Incorporated (DCCI) presently manufactures high altitude pilot and crew protective ensembles utilized by Department of Defense (DOD) and NASA in spaceflight vehicles including the Space Shuttle programs, in high altitude research aircraft based at NASA JSC and NASA Dryden Flight Research Center (DFRC), and in high altitude USAF aircraft deployed in theatres throughout the world.

This hardware is unparalleled in form, fit, and function with unique functional and performance qualifications that meet the rigorous requirements for man-rated Criticality 1 Life Support Systems (LSS), and is tightly integrated in multiple, currently flying aircraft and space flight vehicles. The hardware is largely proprietary in nature, and DCCI possesses all the drawings, patterns, manufacturing fixtures, documented failure recurrence controls, and has developed the unique manufacturing and test procedures related to this hardware. DCCI has demonstrated the experience with this unique hardware and their familiarity with NASA requirements include design and testing of the components utilized for pressure suits and their constituent components, including helmets.

**6. Description of the efforts made to ensure that offers are solicited from as many potential sources as practicable:**

DCCI has the proprietary and patent rights for this helmet assembly and its components used in the S1034 protective ensemble. DCCI is also the sole provider of this life support and crew protective equipment for all high altitude flight applications executed by the Government, whether NASA or DOD. It is estimated for NASA or an alternate source to develop this type of hardware for fabrication would require a substantial investment in infrastructure and technology that would far exceed the value of this procurement.

**7. Description of the market survey conducted, and the results, or a statement of the reasons a market survey was not conducted:**

Consistent with the unique qualifications and proprietary nature of this hardware presented in [4], [5], and [6], DCCI is the only known qualified source. Therefore, no further effort including a market survey was conducted.

**8. Other facts supporting the use of other than full and open competition:**

- a. Any equipment purchased for interface with the S1034 suit must be fully compatible and must be 100 percent dimensionally accurate to the current flight configuration items, all of which have been manufactured by DCCI, to ensure crewmember life safety and mission success.
- b. The production lead time for this hardware is 270 days ARO, and the present inventory of WB-57 flight helmets expires DEC 2011, after which time the WB-57 program will not be able to operate its aircraft in high altitude flight regimens nor meet its commitments to program customers to do so. The WB-57 program schedule and budget does not allow for the additional time and expense of qualifying a new production source for this hardware.
- c. This hardware, S1034E Helmet, P/N GN40883G-01, is produced on a regular and periodic basis by DCCI for the United States Air Force (USAF). The hardware is available as a commercial build-to-print FFP procurement. Production costs, lead times, vendor supply lines, and manufacturing technologies are well understood and will not expose the Government to risk of cost and schedule overruns that would be incurred if developing a new item or seeking an alternate manufacturer to redevelop a like item.

- d. DCCI will not incur extensive start-up and non-recurring engineering costs to manufacture this item.

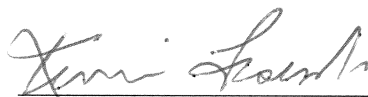
9. **Sources, if any, that expressed an interest in writing in the acquisition:**

A synopsis was posted to FedBizOpps on March 8, 2011. No sources expressed an interest by the date of closing March 15, 2011.

10. **The actions, if any, the agency may take to remove or overcome any barriers to competition before any subsequent acquisition for the supplies or services required:**

Barriers to competition will be mitigated by continuing to consider alternate sources and competitive procurements first, upon identifying a requirement for new life support equipment or services.

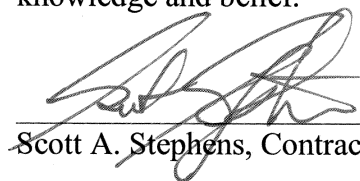
Technical Officer: I certify that the supporting data presented in this justification are accurate and complete.



Kevin J. Lesenski, Technical Officer

16/march 2011  
(Date)

Contracting Officer: I hereby determine that the anticipated cost to the Government will be fair and reasonable and certify that this justification is accurate and complete to the best of my knowledge and belief.



Scott A. Stephens, Contracting Officer

3/16/11  
(Date)